Remarks

Applicants have read and considered the Office Action dated July 15, 2002. Claims 1, 17 and 26 have now been amended while claims 37 - 41 have been added to further distinguish over the prior art. No new matter has been added. Reconsideration and reexamination are hereby requested.

In the Action, claims 1-21, 26-32, 35 and 36 were rejected under 35 U.S.C. § 112 as being indefinite. The Examiner stated that "vicinity of" in claims 1-21, 26-32, 35 and 36 is a relative term that renders the claim indefinite. The claims have now been amended and recite in the "immediate vicinity" rather than "vicinity". "Immediate vicinity" is specifically defined in the specification at the bottom of page 12 and the top of page 13. The definition provides a sufficient standard so that one could reasonably be apprised of the scope of the invention. The term "immediate vicinity of a seed or root" is defined to refer to "any location of a seed or roots wherein if any soluble material or composition is so placed, any exhibit of the plant or of the bacteria or bacterial cells will be in actual contact with the seed as it germinates or the roots as they grow and develop." Applicants assert that this provides sufficient clarity so that one of ordinary skill in the art would be reasonably apprised as to the scope of the invention.

In addition, claim 26 has been amended to correct a typographical error. As Applicants assert that the claims as submitted traverse the Section 112 rejections, Applicants assert that the claims should be allowed.

New claims 37-41 further distinguish over the prior art. New claims 37 and 38 depend from claim 1, which is believed to be allowable for the reasons stated above.

New claim 39 recites a method for enhancing seed germination, seedling emergence or growth of a plant crop comprising the steps of providing a bacterial strain that expresses a lipo chitooligosaccharide (LCO); and incubating said bacterial strain in the immediate vicinity of one of a seed or root of said plant that such that said LCO enhances seed germination, seedling emergence or growth of said plant crop, wherein said incubation enhances seed germination, seedling emergence or growth in comparison to a non-inoculated seed or root of said plant. Applicants assert that this is neither shown nor suggested by the prior art and that the claim

provides sufficient indefiniteness to overcome the Section 112 rejections with regard to the claims rejected in the Office Action.

New claim 40 recites a method for enhancing seed germination, seedling emergence or growth of a plant crop comprising the steps of providing a bacterial strain that expresses a lipo chitooligosaccharide (LCO) in the immediate vicinity of one of a seed or root of said plant such that said bacterial strain, upon expression of said LCO, enhances seed germination, seedling emergence or growth of said plant crop, in comparison to a non-treated seed or root of said plant. New claim 41 further clarifies the bacterial strain. Claims 40 and 41 are believed to distinguish over the prior art and avoid the indefiniteness problems of the Office Action. Applicants assert that no new matter has been added and that the claims are fully supported by the specification. Applicants assert that the claims, as submitted, are now in condition for allowance.

A speedy and favorable action on the merits is hereby solicited. If the Examiner feels that a telephone interview may be helpful in this matter, please contact Applicant's representative at (612) 336-4728.

Respectfully submitted,

MERCHANT & GOULD P.C.

Dated: 1/15/03

By: _____

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1. (AMENDED) A method for enhancing plant crop seed germination, seedling emergence or growth of a plant crop comprising the steps of:

providing a composition that comprises an effective amount of at least one lip chitooligosaccharide (LCO) and an agriculturally suitable carrier;

and applying the composition in the immediate vicinity of a seed, root or plant in an effective amount for enhancing seed germination, seedling emergence or growth of said plant in comparison to an untreated plant.

17. (AMENDED) A method for breaking the dormancy or quiescence of a plant comprising the steps of:

providing an agricultural composition comprising at least one lip chitooligosaccharide (LCO) and an agriculturally suitable carrier;

and applying the composition in the immediate vicinity of a seed, tuber or root in an effective amount to enable a breaking of the dormancy or quiescence of the seed, tuber, or root, in comparison to an untreated seed, tuber, or root.

26. (AMENDED) A method for enhancing seed germination, seedling emergence or growth of a plant crop comprising the steps of:

providing a rhizobial strain [which] that expresses a lipo chitooligosaccharide (LCO); and

incubating the [rhizpobial] rhizobial strain in the immediate vicinity of one of a seed or root of said plant such that said LCO enhances seed germination, seedling emergence or growth of said plant crop, wherein said incubation enhances seed germination, seedling emergence or growth in comparison to a non-inoculated seed or root of said plant.

37. (NEW) The method of claim 1, wherein said composition comprises a bacterial strain that expresses said LCO.

38. (NEW) The method of claim 37, wherein said bacterial strain is a rhizobial strain.

39. (NEW) A method for enhancing seed germination, seedling emergence or growth of a plant crop comprising the steps of:

providing a bacterial strain that expresses a lipo chitooligosaccharide (LCO); and

incubating said bacterial strain in the immediate vicinity of one of a seed or root of said plant such that said LCO enhances seed germination, seedling emergence or growth of said plant crop, wherein said incubation enhances seed germination, seedling emergence or growth in comparison to a non-inoculated seed or root of said plant.

40. (NEW) A method for enhancing seed germination, seedling emergence or growth of a plant crop comprising the step of:

providing a bacterial strain that expresses a lipo chitooligosaccharide (LCO) in the immediate vicinity of one of a seed or root of said plant such that said bacterial strain, upon expression of said LCO, enhances seed germination, seedling emergence or growth of said plant crop, in comparison to a non-treated seed or root of said plant.

41. (NEW) The method of claim 40 wherein said bacterial strain is a rhizobial strain.